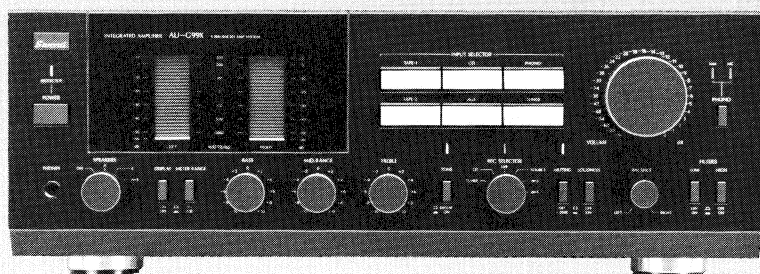



SERVICE MANUAL

INTEGRATED AMPLIFIER

SANSUI AU-G99X



CAUTION

1. Parts identified by the  symbol on the schematic diagram and the parts list are critical for safety. Use only replacement parts that have critical characteristics recommended by the manufacturer.
2. Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

•SPECIFICATIONS

Power output

Min. RMS, both channels driven, from 20 to 20,000 Hz, with no more than 0.003% total harmonic distortion.

160 watts per channel into 8 ohms.

Load impedance..... 8 ohms

Total harmonic distortion

..... less than 0.003% at or below rated min. RMS power output

Intermodulation distortion

(60 Hz: 7 kHz = 4:1 SMPTE method)

..... less than 0.003% at rated power output

Frequency response (at 1 watt)

Overall (from AUX, CD, TUNER, TAPE PLAY-1, 2)

..... DC to 200,000 Hz, +0 dB
-3.0 dB

RIAA curve deviation (PHONO-MM, 20 Hz to 20 kHz)

..... +0.2 dB, -0.2 dB

Input sensitivity and impedance (at 1 kHz)

PHONO (MC)..... 250 μ V/100 ohms

(Max. input capability: 20 mV at 1 kHz, less than 0.01% total harmonic distortion)

PHONO (MM)..... 2.5 mV/47 kohms

(Max. input capability: 200 mV at 1 kHz, less than 0.01% total harmonic distortion)

CD, AUX..... 150 mV/47 kohms

TUNER, TAPE PLAY-1, 2

..... 150 mV/47 kohms

Output level (1,000 Hz)

TAPE REC-1, 2..... 150 mV into 47 kohms

Signal to noise ratio (short-circuit, A-network)

PHONO (MC)..... 70 dB

PHONO (MM)..... 88 dB

CD, AUX..... 110 dB

TUNER, TAPE PLAY-1, 2

..... 110 dB

Controls and Filter

BASS..... ± 10 dB at 50 Hz

MID RANGE..... ± 10 dB at 1 kHz

TREBLE..... ± 10 dB at 10 kHz

MUTING..... -20 dB

LOUDNESS..... +8 dB at 50 Hz

+6 dB at 10 kHz

(VOLUME: -30 dB position)

FILTERS

LOW..... -3 dB at 16 Hz (6 dB/oct)

HIGH..... -3 dB at 10 kHz (6 dB/oct)

Power requirements

Power voltage..... 120/220/240V (50/60 Hz)

For U.S.A. & Canada

..... 120V (60 Hz)

Power consumption.... 530 watts 640 VA Rated

530 watts Maximum

Dimensions

430 mm (16-15/16") W

160 mm (6-5/16") H

430 mm (16-15/16") D

Weight

17.3 kg (38 lbs) net

19 kg (41.9 lbs) packed

* Design and specifications subject to changes without notice for improvements.

* Due to local laws and regulations, this unit sold in some areas are not equipped with variable voltage selectors.



SANSUI ELECTRIC CO., LTD.

CAUTION

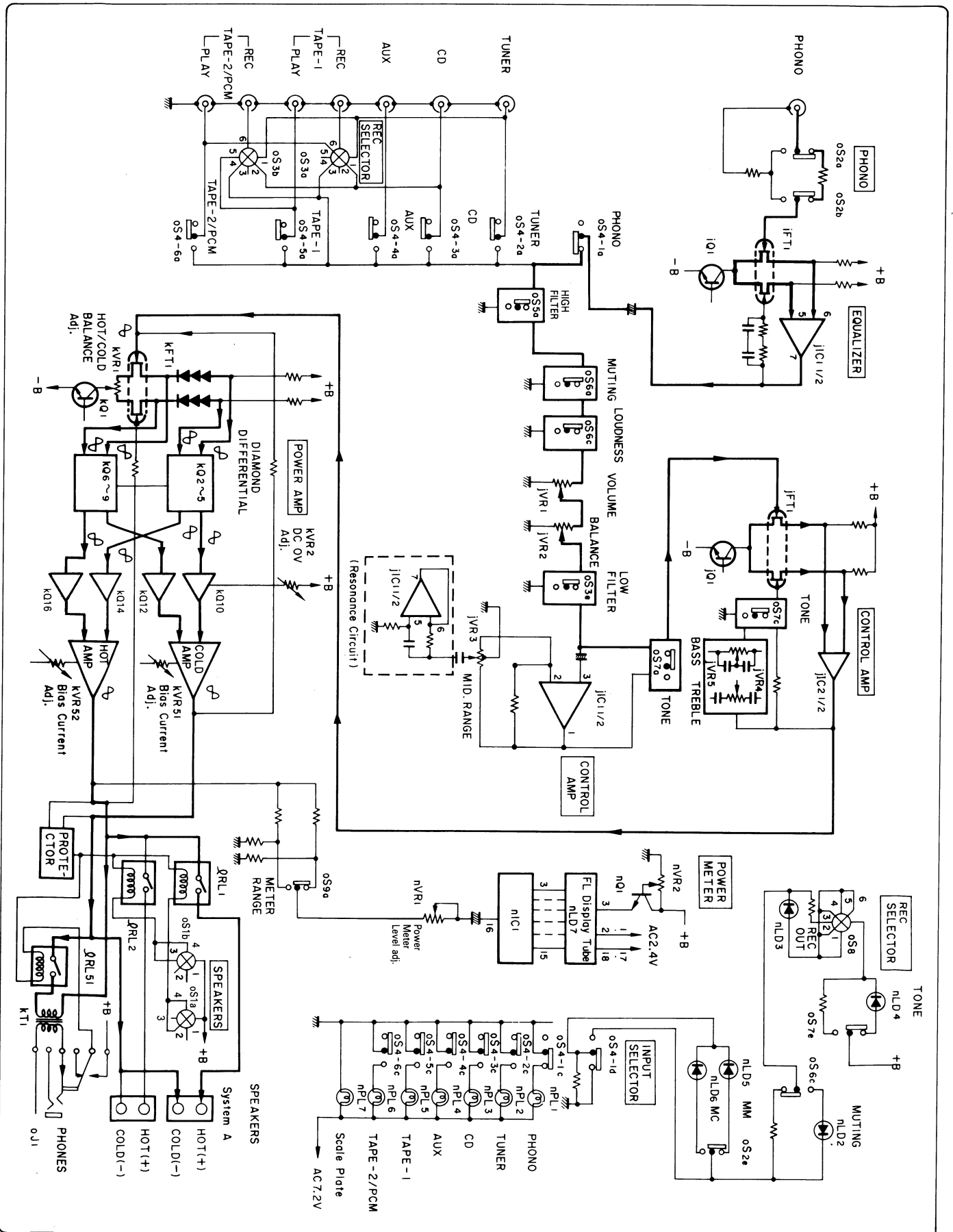
1. The symbols, UL, CSA, SA, BS, UK, EU, AS and XX on the parts list and the schematic diagram mean followings respectively.

UL.....	Manufactured for U.S.A market. (Underwriters Laboratories approved model.)
CSA	Manufactured for Canadian market.
SA.....	Manufactured for South African market.
BS, UK	Manufactured for United Kingdom market.
EU	Manufactured for European market.
AS.....	Manufactured for Australian market.
XX.....	Standard Version.
NON MARK	Common Parts.
2. Some printed circuit boards are not supplied as the assembled.
To separate these in this service manual, the stock No's are not indicated at the ends of the board names. However, the individual parts on the circuit boards are provided by orders.
3. Since some of capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors & resistors, which was issued on February 1983.
4. Abbreviations in this service manual are as follows.

•Abbreviations List

C.R.	: Carbon Resistor	E.B.L.	: Low Leak Bi-Polar
S.R.	: Solid Resistor		Electrolytic Capacitor
Ce.R.	: Cement Resistor	Ta.C.	: Tantalum Capacitor
M.R.	: Metal Film Resistor	F.C.	: Film Capacitor
F.R.	: Fusing Resistor	M.P.	: Metalized Paper Capacitor
N.I.R.	: Non-Inflammable Resistor	P.C.	: Polystyrene Capacitor
A.R.	: Array Resistor	G.C.	: Gimmic Capacitor
C.C.	: Ceramic Capacitor	A.C.	: Array Capacitor
C.T.	: Ceramic Capacitor,	V.R.	: Variable Resistor
	Temperature Compensation	S.V.R.	: Semi Variable Resistor
E.C.	: Electrolytic Capacitor	SW.	: Switch
E.L.	: Low Leak Electrolytic	Chip R.	: Chip Resistor
	Capacitor	Chip C.	: Chip Capacitor
E.B.	: Bi-Polar Electrolytic		
	Capacitor		

1. BLOCK DIAGRAM



2. ADJUSTMENT

- Condition:**
1. Master Volume Minimum
 2. Room Temperature 18°C ~ 28°C (65°F ~ 83°F)
 3. Test Equipment DC Volt Meter
 4. For this adjustment, run the unit for more than 20 minutes after the power is switched ON.
 5. Before turning ON POWER Switch set kVR51, 52 little counterclockwise.

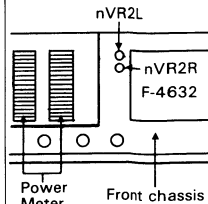
2-1. Power Amp. Circuit Adjustment (Refer to Top View on Page 12)

Note: Perform "STEP 1 ~ 4" again after adjusting "STEP 3, 4".

STEP	SUBJECT	MESURE OUTPUT	ADJUST	ADJUST FOR
1	Hot/Cold Balance Adj. <L-ch>	DC Voltage between Speaker Terminals HOT and COLD. <L-ch>	kVR1 F-4726	DC 0mV ± 5mV
2	Hot/Cold Balance Adj. <R-ch>	DC Voltage between Speaker Terminals HOT and COLD. <R-ch>	kVR1 F-4727	DC 0mV ± 5mV
3	Center DC 0V Adj. <L-ch>	DC Voltage between Speaker Terminal HOT and GND. <L-ch>	kVR2 F-4726	DC 0mV ± 5mV
4	Center DC 0V Adj. <R-ch>	DC Voltage between Speaker Terminal HOT and GND. <R-ch>	kVR2 F-4727	DC 0mV ± 5mV
5	Bias Current Adj. <Hot Side Amp. of L-ch>	DC Voltage between Emitters of power transistors (kQ62 & kQ64). <L-ch>	kVR52 <L-ch> F-4296	DC 20mV ± 2mV
6	Bias Current Adj. <Cold Side Amp. of L-ch>	DC Voltage between Emitters of power transistors (kQ61 & kQ63). <L-ch>	kVR51 <L-ch> F-4296	DC 20mV ± 2mV
7	Bias Current Adj. <Hot Side Amp. of R-ch>	DC Voltage between Emitters of power transistors (kQ62 & kQ64). <R-ch>	kVR52 <R-ch> F-4296	DC 20mV ± 2mV
8	Bias Current Adj. <Cold Side Amp. of R-ch>	DC Voltage between Emitters of power transistors (kQ61 & kQ63). <R-ch>	kVR51 <R-ch> F-4296	DC 20mV ± 2mV

2-2. Power Meter Adjustment

- Note:**
1. INPUT SELECTOR AUX
 2. NORMAL INPUT level 0 dB

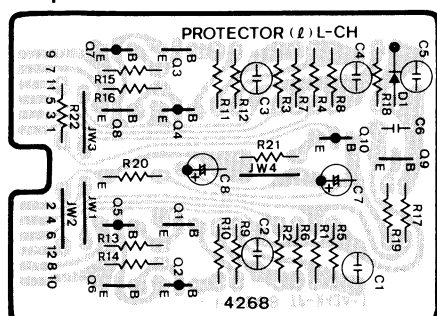
STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
		FROM	TO				
1.	0dB Level Adjustment <L-CH>	O.S.C. output 1kHz so as to obtain 36V between Speaker Terminals HOT and COLD	AUX <L-CH>	Power Meter	nVR1 (F-4724)	Meter Level 0dB	•Remove the front panel, scale plate ass'y & F-4633 circuit board for adjustment of nVR2 
2.	0dB Level Adjustment <R-CH>	Same as above	AUX <R-CH>	Power Meter	nVR1 (F-4724)	Meter Level 0dB	
3.	Power Meter Brightness Adjustment	Same as above	AUX <L-CH> & AUX <R-CH>	Power Meter	nVR2L (F-4638) or nVR2R (F-4638)	Turn both nVR2 to obtain maximum brightness. Then adjust one nVR2 on brighter channel to obtain equal brightness with the other channel.	

3. PARTS LOCATION & PARTS LIST

3-1. F-4268 Protector (L-CH) Circuit Board

(Stock No. 00828001)

Component Side



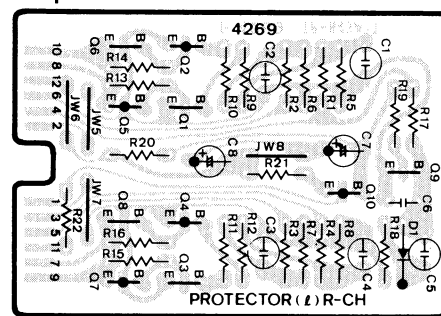
Parts List

Parts No.	Stock No.	Description
•Transistor		
IQ1	46367101	2SC2603
IQ2	46367001	2SA1115
IQ3	46367101	2SC2603
IQ4	46367001	2SA1115
IQ5	46367001	2SA1115
IQ6	46367101	2SC2603
IQ7	46367001	2SA1115
IQ8	46367101	2SC2603
IQ9	46367101	2SC2603
IQ10	46367001	2SA1115
•Diode		
ID1	03117600 or 46086000	1S2473T77 1S1588TP-3
IC1	46655600	1000pF 100V F.C.
IC2	46655600	1000pF 100V F.C.
IC3	46655600	1000pF 100V F.C.
IC4	46655600	1000pF 100V F.C.
IC5	46654800	470pF 100V F.C.
IC6	46283300	0.022μF 50V F.C.

3-2. F-4269 Protector (R-CH) Circuit Board

(Stock No. 00828101)

Component Side

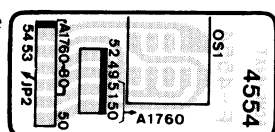


Parts List

Parts No.	Stock No.	Description
•Transistor		
IQ1	46367101	2SC2603
IQ2	46367001	2SA1115
IQ3	46367101	2SC2603
IQ4	46367001	2SA1115
IQ5	46367001	2SA1115
IQ6	46367101	2SC2603
IQ7	46367001	2SA1115
IQ8	46367101	2SC2603
IQ9	46367101	2SC2603
IQ10	46367001	2SA1115
•Diode		
ID1	03117600 or 46086000	1S2473T77 1S1588TP-3
IC1	46655600	1000pF 100V F.C.
IC2	46655600	1000pF 100V F.C.
IC3	46655600	1000pF 100V F.C.
IC4	46655600	1000pF 100V F.C.
IC5	46654800	470pF 100V F.C.
IC6	46283300	0.022μF 50V F.C.

3-3. F-4554 Speaker Selector Board

Component Side

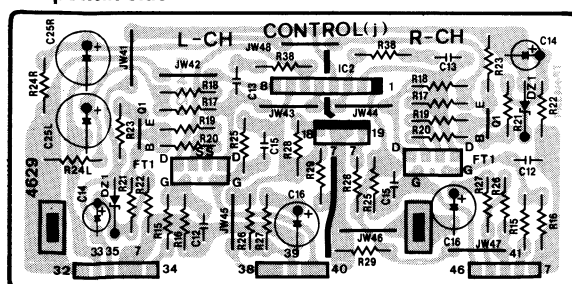


Parts List

Parts No.	Stock No.	Description
oS1	46730700	Rotary SW., SPEAKERS

3-4. F-4629 Control Amp. Circuit Board (Stock No. 00826001)

Component Side



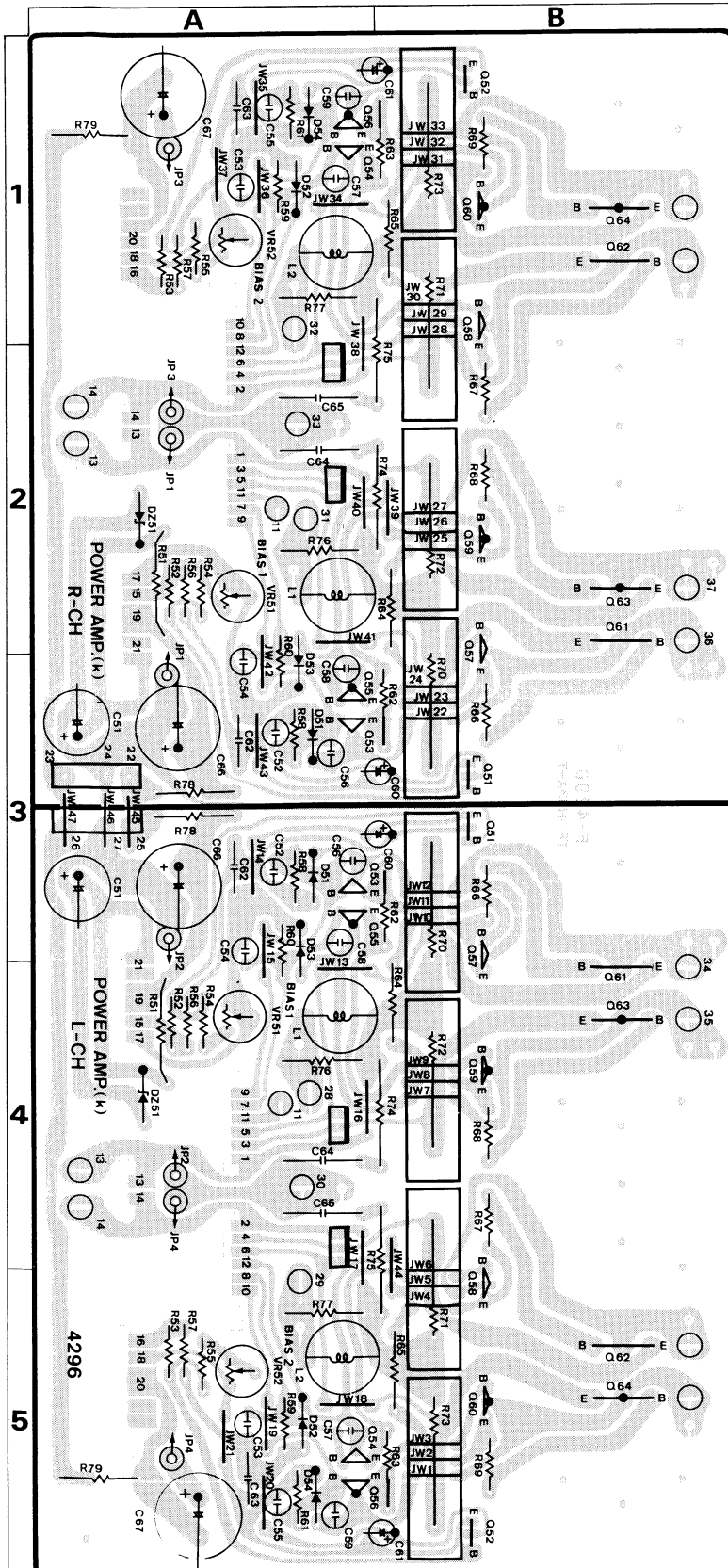
Parts List

Parts No.	Stock No.	Description
•Transistor		
jQ1	46581701	2SC1845

Parts No.	Stock No.	Description
•FET		
jFT1	46723601 or 46723602	2SK389-BL 2SK389-V
•IC		
jIC2	46579100	M5219L
•Zener Diode		
jDZ1	46111800	05Z6.2-Y
jR17	48028500	2.2kΩ 1/4W C.R.
jR18	48028500	2.2kΩ 1/4W C.R.
jR26	48029500	5.6kΩ 1/4W C.R.
jR27	48027700	1kΩ 1/4W C.R.
jR28	48026000	200Ω 1/4W C.R.
jC12	46653200	100pF 100V F.C.
jC13	46655200	680pF 100V F.C.

3-5. F-4296 Power Amp. Circuit Board (Stock No. 00828201)

Component Side

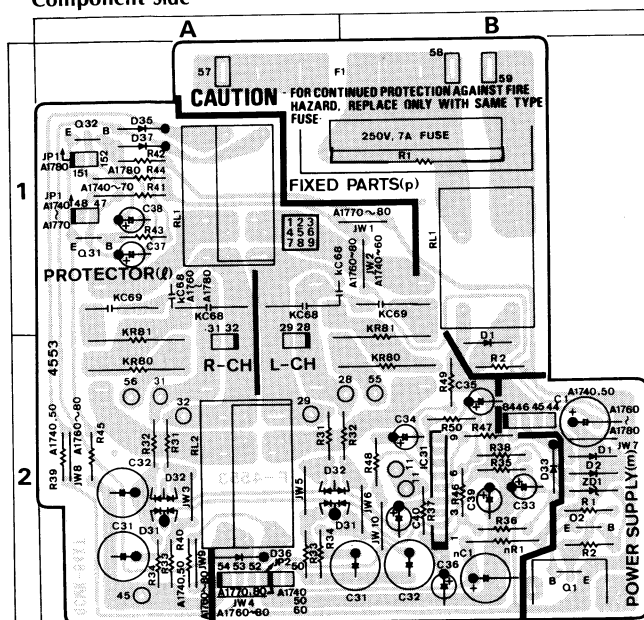


Parts List

Parts No.	Stock No.	Description
• Transistor		
△ kQ51	03067401	2SC1845
△ kQ52	03067401	2SC1845
kQ53	07208701	2SC2705
	or 48112801	2SC2229
kQ54	07208701	2SC2705
	or 48112801	2SC2229
kQ55	07208801	2SA1145
	or 48112701	2SA949
kQ56	07208801	2SA1145
	or 48112701	2SA949
kQ57	46728901	2SC3298
kQ58	46728901	2SC3298
kQ59	46728801	2SA1306
kQ60	46728801	2SA1306
△ kQ61	46740401	2SC2922LF204
△ kQ62	46740401	2SC2922LF204
△ kQ63	46740301	2SA1216LF204
△ kQ64	46740301	2SA1216LF204
• Diode		
kD51	03117200	1S2091
kD52	03117200	1S2091
kD53	03117200	1S2091
kD54	03117200	1S2091
• Zener Diode		
kDZ51	03171900	RD27FB
△ kR51	00191400	680Ω 2W N.I.R.
△ kR58	46229700	390Ω 1/2W N.I.R.
△ kR59	46229700	390Ω 1/2W N.I.R.
△ kR60	46229700	390Ω 1/2W N.I.R.
△ kR61	46229700	390Ω 1/2W N.I.R.
△ kR62	08923800	560Ω 1/2W N.I.R.
△ kR63	08923800	560Ω 1/2W N.I.R.
△ kR64	08923800	560Ω 1/2W N.I.R.
△ kR65	08923800	560Ω 1/2W N.I.R.
△ kR66	46227400	4.7Ω 1/2W N.I.R.
△ kR67	46227400	4.7Ω 1/2W N.I.R.
△ kR68	46227400	4.7Ω 1/2W N.I.R.
△ kR69	46227400	4.7Ω 1/2W N.I.R.
△ kR70	46740000	0.27Ω 7W Ce.R.
△ kR71	46740000	0.27Ω 7W Ce.R.
△ kR72	46740000	0.27Ω 7W Ce.R.
△ kR73	46740000	0.27Ω 7W Ce.R.
△ kR74	00185500	10Ω 2W N.I.R.
△ kR75	00185500	10Ω 2W N.I.R.
△ kR76	00183600	4.7Ω 1W N.I.R.
△ kR77	00183600	4.7Ω 1W N.I.R.
△ kR78	08922300	33Ω 1/2W N.I.R.
△ kR79	08922300	33Ω 1/2W N.I.R.
kC52	46655600	1000pF 100V F.C.
kC53	46655600	1000pF 100V F.C.
kC54	46655600	1000pF 100V F.C.
kC55	46655600	1000pF 100V F.C.
kC64	00411600	0.047μF 400V P.C.
kC65	00411600	0.047μF 400V P.C.
kL1	46851800	Inductor 0.5μH
kL2	46851800	Inductor 0.5μH
kVR51	10342100	1kΩ(B) S.V.R., bias adj.
kVR52	10342100	1kΩ(B) S.V.R., bias adj.

3-6. F-4553 Protector Circuit Board (Stock No. 00827801)

Component Side



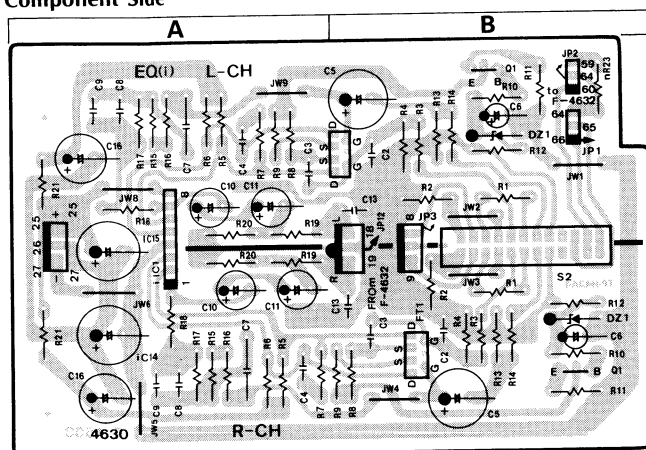
Parts List

Parts No.	Stock No.	Description
△ KR80	00185500	10Ω 2W N.I.R.
△ KR81	00185500	10Ω 2W N.I.R.
KC68	00411600	0.047μF 400V P.C.
KC69	00411600	0.047μF 400V P.C.
• Transistor		
IQ31	07194801	2SC1815
IQ32	07194801	2SC1815
• IC		
IIC31	46207600	TA7317P
• Diode		
ID31	46463900	MC921

Parts No.	Stock No.	Description
ID32	46463700	MC911
ID33	03117700	10E-2
ID35	03117700	10E-2
ID36	03117700	10E-2
ID37	03111800	1S1588
	or 07176400	1S2473HS
△ IR41	46250800	1.8kΩ 1W N.I.R.
IC31	00304400	100μF 16V E.B.
IC32	00304400	100μF 16V E.B.
IC36	07129900	1μF 50V E.B.
IRL1	46446400	Relay JC24V
IRL2	46446400	Relay JC24V
• Transistor		
△ mQ1	03086101	2SD357
mQ2	03067401	2SC1845
• Diode		
mD1	03117700	10E-2
△ mD2	03117700	10E-2
• Zener Diode		
mDZ1	46105900	05Z24-Z
△ mR1	46228400	33Ω 1/2W N.I.R.
△ nR1	46250800	1.8kΩ 1W N.I.R.
oZ1	46739500	8P-Terminal, SPEAKERS
• Diode		
pD1	03117700	10E-2
pR1	46739900	3.9Ω 10W Ce.R.
pF1	07189500	Fuse 10A 250V (UL,CSA)
pRL1	46222200	Relay 1M G4W

3-7. F-4630 Equalizer Amp. Circuit Board (Stock No. 00826101)

Component Side



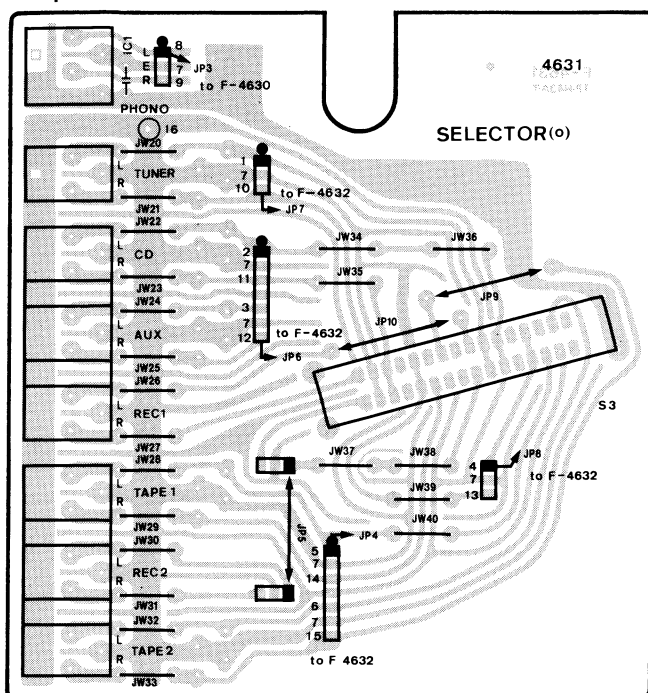
Parts List

Parts No.	Stock No.	Description
• Transistor		
IQ1	46581701	2SC1845
• FET		
IFT1	46723601	2SK389-BL
	or 46723602	2SK389-V

Parts No.	Stock No.	Description
• IC		
iIC1	46579100	M5219L
• Zener Diode		
iDZ1	46111800	05Z6.2-Y
iR5	48027700	1kΩ 1/4W C.R.
iR6	48027700	1kΩ 1/4W C.R.
iR13	48025300	100Ω 1/4W C.R.
iR14	48023000	11Ω 1/4W C.R.
iR15	48031900	56kΩ 1/4W C.R.
iR16	48028100	1.5kΩ 1/4W C.R.
iR17	48029300	4.7kΩ 1/4W C.R.
iR18	48025300	100Ω 1/4W C.R.
iC2	46653600	150pF 100V F.C.
iC4	46655600	1000pF 100V F.C.
iC7	00414500	0.056μF 100V P.C.
iC8	00413200	0.016μF 100V P.C.
iC9	46655000	560pF 100V F.C.
iC13	46694400	4700pF 50V F.C.
oS2	48116700	Push SW., PHONO

3-8. F-4631 Input Terminal Circuit Board

Component Side

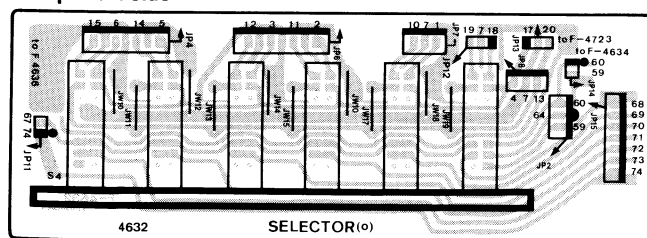


Parts List

Parts No.	Stock No.	Description
oS3	07200200	Slide SW., REC SELECTOR
oZ3	46438100	2P-Terminal, PHONO
oZ4	46363700	2P-Terminal, TUNER
oZ5	46363900	6P-Terminal, CD, AUX, TAPE-1, TAPE-2/PCM

3-9. F-4632 Input Selector Circuit Board

Component Side

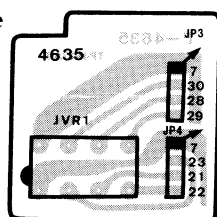


Parts List

Parts No.	Stock No.	Description
oS4	48116800	Push SW., INPUT SELECTOR

3-10. F-4635 VOLUME Board

Component Side



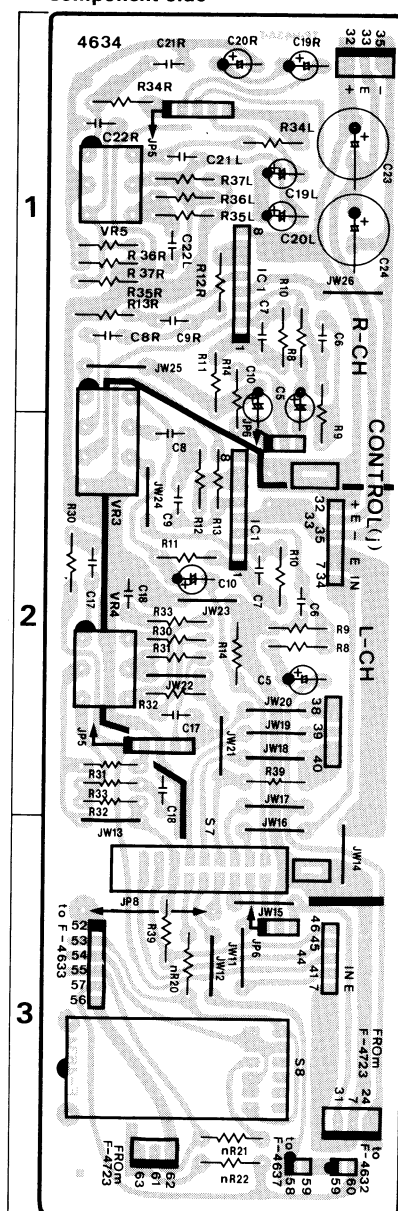
Parts List

Parts No.	Stock No.	Description
jVR1	48110400	100kΩ(B) V.R., VOLUME

3-11. F-4634 Control Amp. Circuit Board

Component Side

(Stock No. 00826501)

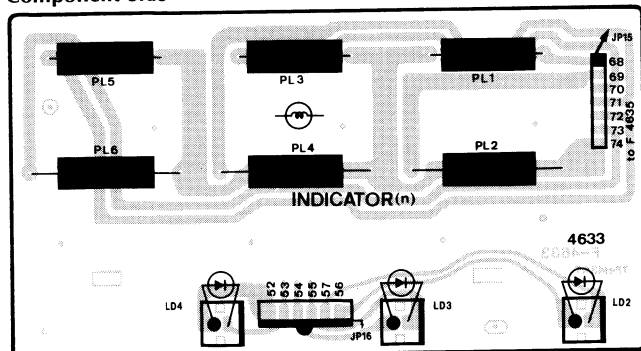


Parts List

Parts No.	Stock No.	Description
•IC		
jIC1	46288800	M5220L
jC6	46654800	470pF 100V F.C.
jC8	46697400	0.082μF 50V F.C.
jC9	46693300	1600pF 50V F.C.
jC17	46693500	2000pF 50V F.C.
jC18	46695500	0.013μF 50V F.C.
jC21	46696000	0.022μF 50V F.C.
jC22	46697900	0.13μF 50V F.C.
jVR3	48110700	50kΩ(GW) V.R., MID. RANGE
jVR4	48110600	100kΩ(C) V.R., TREBLE
jVR5	48110600	100kΩ(C) V.R., BASS
oS7	48116600	Push SW., TONE
oS8	48110800	Rotary SW., REC SELECTOR

3-12. F-4633 Input Indicator Circuit Board

Component Side

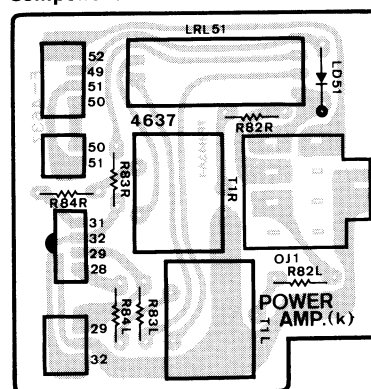


Parts List

Parts No.	Stock No.	Description
•LED		
nLD2	03193700	SEL1110S, MUTING
nLD3	03193700	SEL1110S, REC SELECTOR
nLD4	03193700	SEL1110S, TONE
•Pilot Lamp		
nPL1	48116300	Pilot Lamp 8V 0.1A, PHONO
nPL2	48116300	Pilot Lamp 8V 0.1A, TUNER
nPL3	48116300	Pilot Lamp 8V 0.1A, CD
nPL4	48116300	Pilot Lamp 8V 0.1A, AUX
nPL5	48116300	Pilot Lamp 8V 0.1A, TAPE-1
nPL6	48116300	Pilot Lamp 8V 0.1A, TAPE-2

3-14. F-4637 Head Phones Circuit Board

Component Side

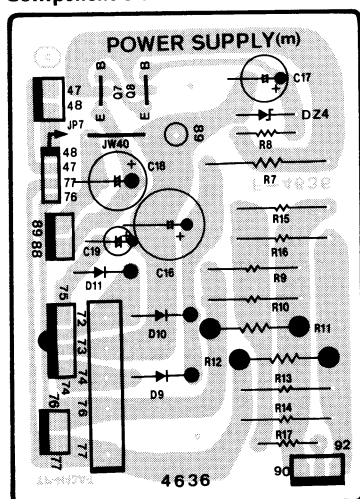


Parts List

Parts No.	Stock No.	Description
Δ kR82	08922300	33Ω 1/2W N.I.R.
kT1	46841800	Output Transformer 3230, PHONES
•Diode		
ID51	03117700	10E-2
IRL51	11504300 or 11504301	Relay Relay LA2A-24B
oJ1	46078200	Jack, PHONOES

3-13. F-4636 Power Supply Circuit Board

Component Side

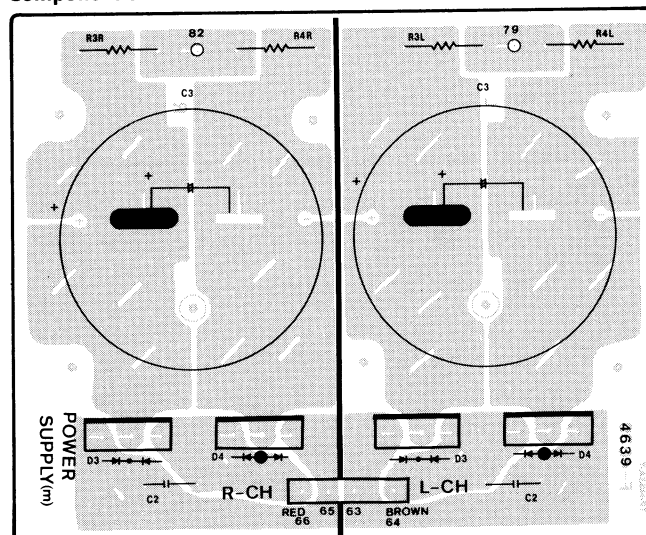


Parts List

Parts No.	Stock No.	Description
•Transistor		
Δ mQ7	48073601	2SD1061
mQ8	46581701	2SC1845
•Diode		
mD9	03117700	10E-2
mD10	03117700	10E-2
mD11	03117700	10E-2
•Zener Diode		
mD24	46115200	05Z18-Z
Δ mR7	00191300	68Ω 2W N.I.R.

3-15. F-4639 Power Supply Circuit Board

Component Side

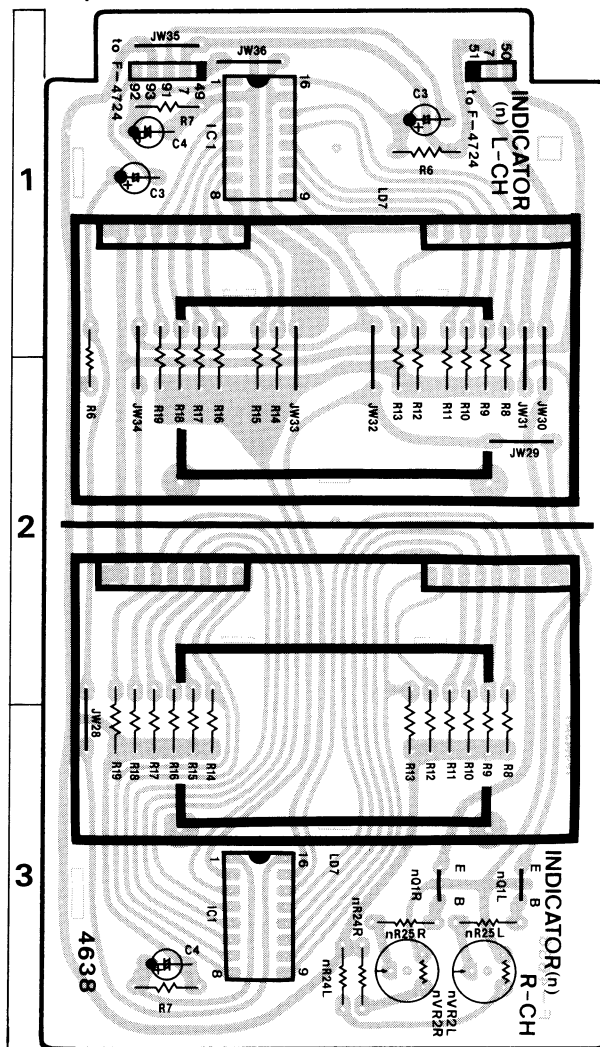


Parts List

Parts No.	Stock No.	Description
•Diode		
Δ mD3	48110100	CTU-32S
Δ mD4	48110000	CTU-32R
mC2	07287400	0.01μF 630V F.C.
mC3	48110200	22000μF 90V E.L.

3-16. F-4638 Power Meter Circuit Board

(Stock No. 00826901)

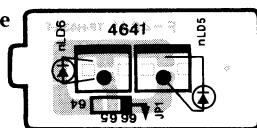


Parts List

Parts No.	Stock No.	Description
•Transistor		
nQ1	46581701	2SC1845
•IC		
nIC1	48059800	BA6148
nLD7	48116900	FL. Display Tube FGS25SB1
nVR2	10351100	4.7kΩ(B) S.V.R., Power Meter Brightness

3-17. F-4641 PHONO (MM/MC) Indicator Board

Component Side

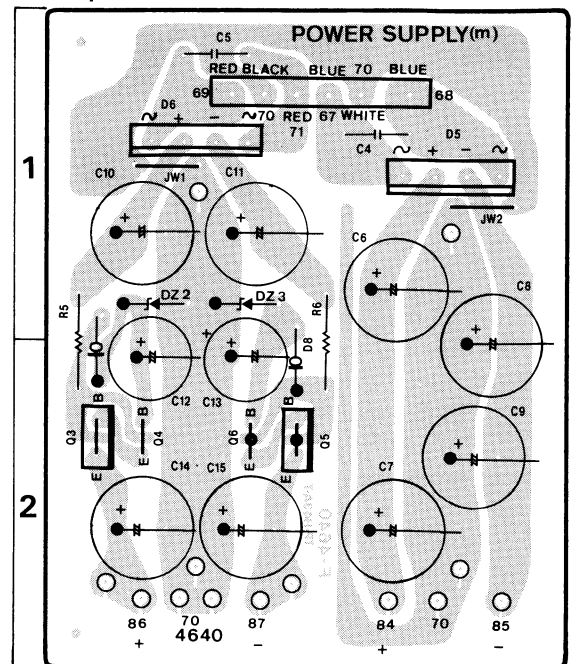


Parts List

Parts No.	Stock No.	Description
•LED		
nLD5	03193700	SEL1110S, MM
nLD6	07246200	SEL1710K, MC

3-18. F-4640 Power Supply Circuit Board

Component Side

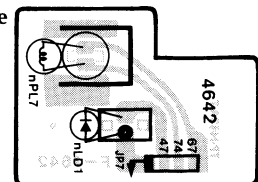


Parts List

Parts No.	Stock No.	Description
•Transistor		
mQ3	48073601	2SD1061
mQ4	03067401	2SC1845
mQ5	48064601	2SB825
mQ6	03010901	2SA992
•Diode		
mD5	03117000	RB152-LFF
mD6	03117000	RB152-LFF
mD7	46445500	Current RE. Diode 10YD4.5
or 46445600		Current RE. Diode 10YD4.5
mD8	46445500	Current RE. Diode 10YD4.5
or 46445600		Current RE. Diode 10YD4.5
•Zener Diode		
mDZ2	46105500	05Z22-Y
mDZ3	46105500	05Z22-Y
mR5	08921300	4.7Ω 1/2W N.I.R.
mR6	08921300	4.7Ω 1/2W N.I.R.
mC4	07287400	0.01μF 630V F.C.
mC5	07287400	0.01μF 630V F.C.

3-19. F-4642 Protector Indicator Board

Component Side

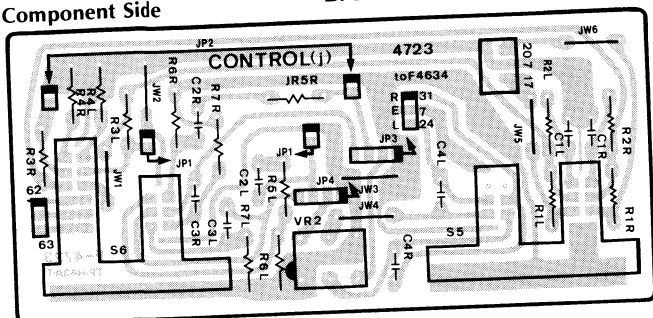


Parts List

Parts No.	Stock No.	Description
nLD1	03193700	SEL1110S, PROTECTOR
nPL7	46499900	Pilot Lamp 8V 0.15A, Scale Plate

3-20. F-4723 LOUDNESS, MUTING, FILTER & BALANCE Circuit Board

Component Side

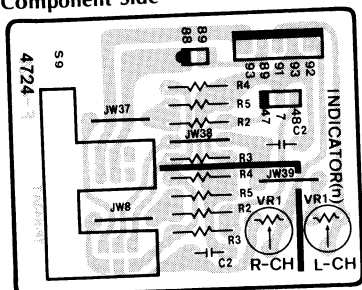


Parts List

Parts No.	Stock No.	Description
jC1	46694000	3300pF 50V F.C.
jC2	46655000	560pF 100V F.C.
jC3	46697200	0.068μF 50V F.C.
jC4	46697600	0.1μF 50V F.C.
jVR2	48110500	250kΩ(MN) V.R., BALANCE
oS5	48116400	Push SW., FILTERS
oS6	48116500	Push SW., LOUDNESS, MUTING

3-21. F-4724 METER RANGE & DISPLAY Circuit Board

Component Side

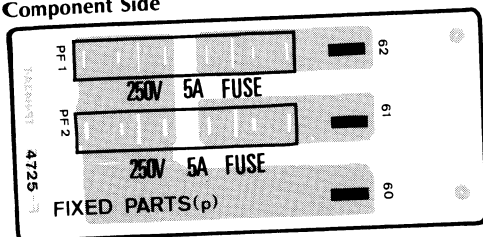


Parts List

Parts No.	Stock No.	Description
nC2	46692800	1000pF 50V M.C.
nVR1	46738700	10kΩ S.V.R., Power Meter Level adj.
oS9	48116400	Push SW., DISPLAY, METER RANGE

3-22. F-4725 Fuse Board

Component Side



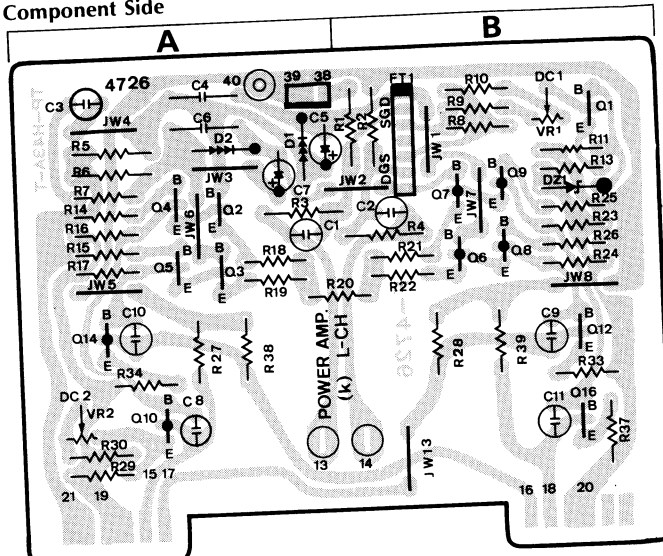
Parts List

Parts No.	Stock No.	Description
pF2	07189100	Fuse 5.0A 250V (XX)
pF3	07189100	Fuse 5.0A 250V (XX)

3-23. F-4726 Driver Amp. (L-ch) Circuit Board

(Stock No. 00827601)

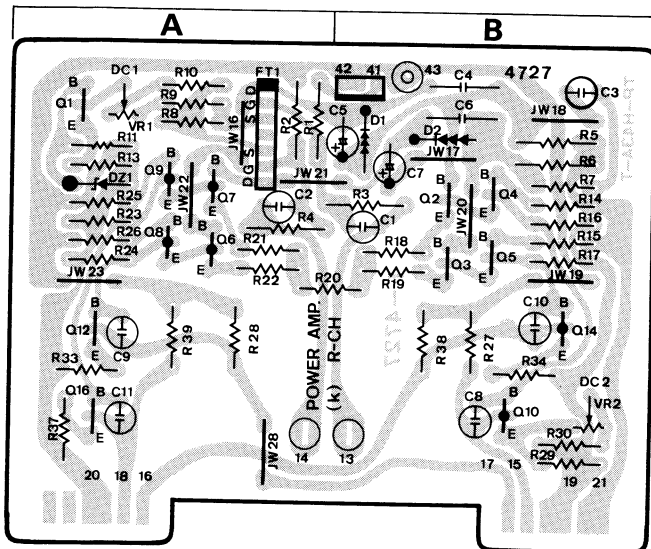
Component Side



Parts List

Parts No.	Stock No.	Description
• Transistor		
kQ1	46581701	2SC1845
kQ2	46581701	2SC1845
kQ3	46581701	2SC1845
kQ4	46581701	2SC1845
kQ5	46581701	2SC1845
kQ6	46581601	2SA992
kQ7	46581601	2SA992
kQ8	46581601	2SA992
kQ9	46581601	2SA992
kQ10	46728201	2SA1145
kQ12	46728301	2SC2705
kQ14	46728201	2SA1145
kQ16	46728301	2SC2705
• FET		
kFT1	07110000 or 07110001	μPA68H-L μPA68H-M
• Diode		
kD1	03401700	Varistor MV103
kD2	03401700	Varistor MV103
• Zener Diode		
kDZ1	46114800	05Z16-Y
kR1	48013200	1kΩ 1/4W C.R.
kR2	48013400	1.2kΩ 1/4W C.R.
kR3	48017100	43kΩ 1/4W C.R.
kR4	48017100	43kΩ 1/4W C.R.
kR5	48014600	3.9kΩ 1/4W C.R.
kR6	48014600	3.9kΩ 1/4W C.R.
kR11	08908700	3.9kΩ 1/4W C.R.
kR30	46229500	270Ω 1/2W N.I.R.
kR37	46229100	120Ω 1/2W N.I.R.
kC3	46656000	1500pF 100V F.C.
kVR1	10335700	100Ω(B) S.V.R., HOT/COLD Balance adj.
kVR2	10336100	470Ω(B) S.V.R., DC 0V adj.

3-24. F-4727 Driver Amp. (R-ch) Circuit Board Component Side (Stock No. 00827701)



Parts List

Parts No.	Stock No.	Description
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•Transistor

kQ1	46581701	2SC1845
kQ2	46581701	2SC1845
kQ3	46581701	2SC1845
kQ4	46581701	2SC1845
kQ5	46581701	2SC1845
kQ6	46581601	2SA992
kQ7	46581601	2SA992
kQ8	46581601	2SA992
kQ9	46581601	2SA992
△ kQ10	46728201	2SA1145
△ kQ12	46728301	2SC2705
△ kQ14	46728201	2SA1145
△ kQ16	46728301	2SC2705

•FET

kFT1	07110000 or 07110001	μPA68H-L μPA68H-M
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•Diode

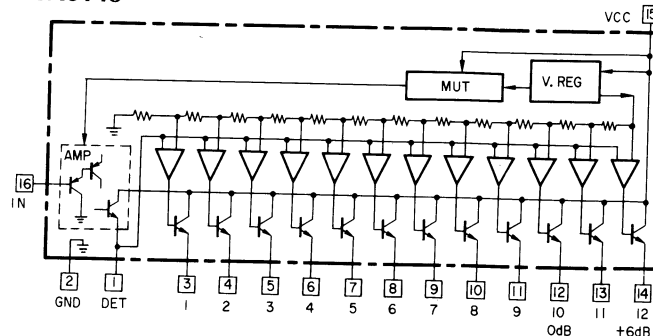
kD1	03401700	Varistor MV103
kD2	03401700	Varistor MV103

•Zener Diode

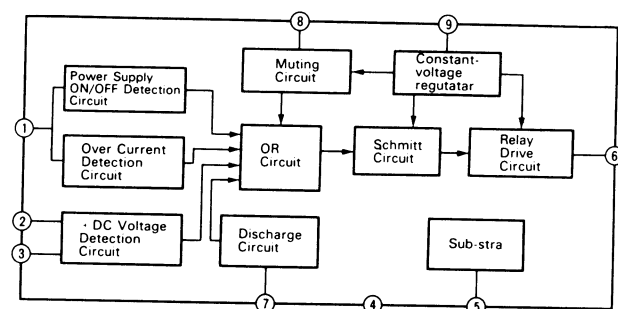
kDZ1	46114800	05Z16-Y
kR1	48013200	1kΩ 1/4W C.R.
kR2	48013400	1.2kΩ 1/4W C.R.
kR3	48017100	43kΩ 1/4W C.R.
kR4	48017100	43kΩ 1/4W C.R.
kR5	48014600	3.9kΩ 1/4W C.R.
kR6	48014600	3.9kΩ 1/4W C.R.
△ kR11	08908700	3.9kΩ 1/4W C.R.
△ kR30	46229500	270Ω 1/2W N.I.R.
△ kR37	46229100	120Ω 1/2W N.I.R.
kC3	46656000	1500pF 100V F.C.
kVR1	10335700	100Ω(B) S.V.R., HOT/COLD Balance adj.
kVR2	10336100	470Ω(B) S.V.R., DC 0V adj.

4. INTERIOR BLOCK DIAGRAM OF IC

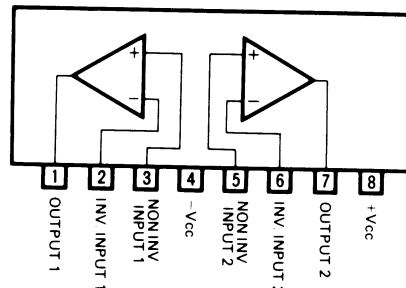
•BA6148



•TA7317P (Protector IC)

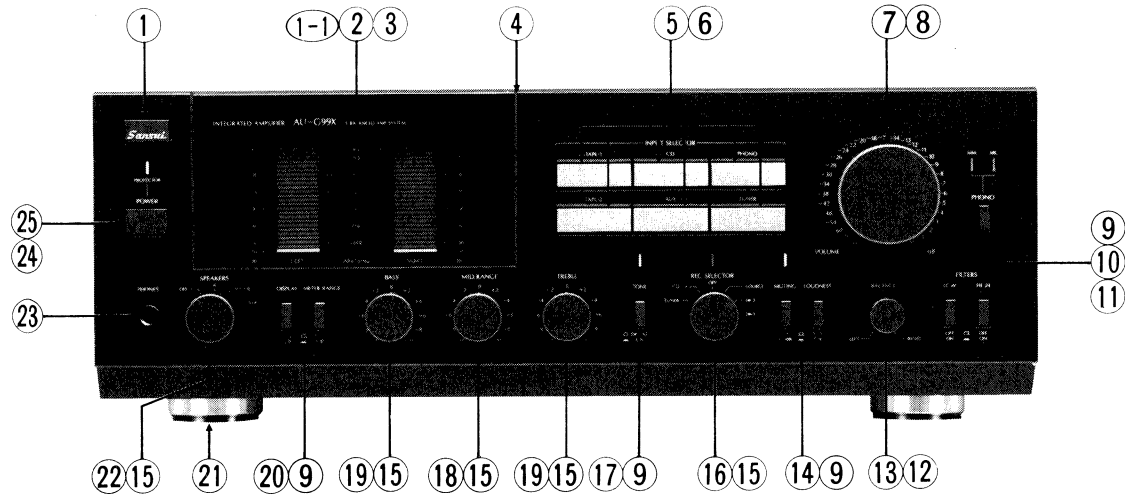


•M5219L, M5220L (Audio Pre IC)

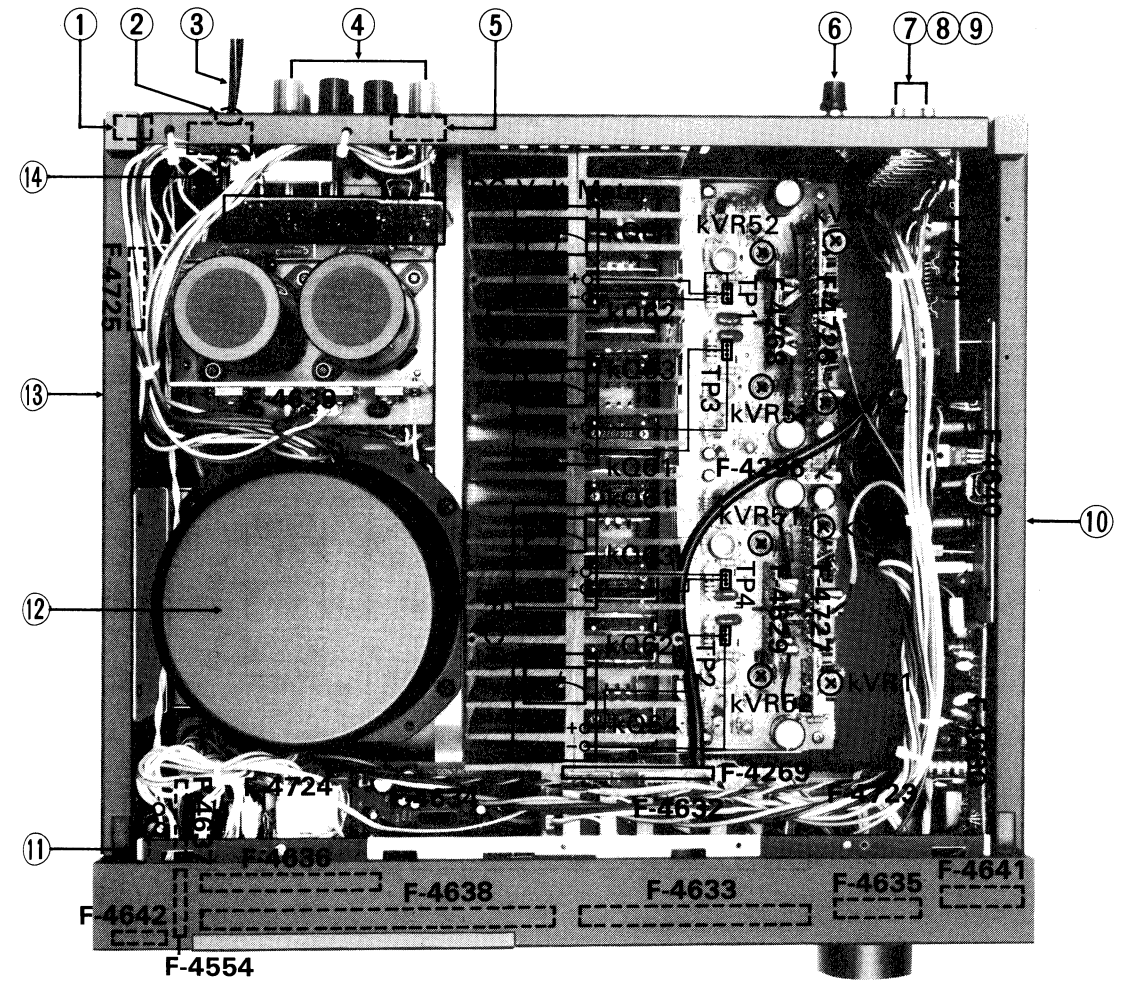


5. OTHER PARTS

5-1. Front View



5-2. Top View



Parts List <Front View>

Parts No.	Stock No.	Description
1	47657200	Front Panel Ass'y
1-1	47635200	Front Glass
2	47662600	Scale Plate Ass'y
3	48116900	FL. Display Tube FGS25SB1
4	47657100	Bonnet
5	47646000	Joint Shaft
6	48116800	Push SW., INPUT SELECTOR
7	47656800	Knob, VOLUME
8	48110400	100k Ω (B) V.R., VOLUME
9	47635500	Knob, PHONO, FILTERS, LOUDNESS, MUTING TONE, METER RANGE, DISPLAY
10	48116700	Push SW., PHONO
11	48116400	Push SW., FILTERS
12	47656600	Knob, BALANCE
13	48110500	250k Ω V.R., BALANCE
14	48116500	Push SW., LOUDNESS, MUTING
15	47656700	Knob, REC SELECTOR, TREBLE, MID RANGE, BASS, SPEAKERS
16	48110800	Rotary SW., REC SELECTOR
17	48116600	Push SW., TONE
18	48110700	50k Ω V.R., MID RANGE
19	48110600	100k Ω (C) V.R., TREBLE, BASS
20	48116400	Push SW., DISPLAY, METER RANGE
21	47338400	Leg Ass'y
22	46730700	Rotary SW., SPEAKERS
23	46078200	Jack, PHONES
24	47633700	Knob, POWER
25	46612900	Push SW., POWER

Parts List <Top View>

Parts No.	Stock No.	Description
1	46730400	AC OUTLET
2	39104900	Strain Relief
3	38004900	Power Supply Cord
4	46739500	8P-Terminal, SPEAKES
5	46739400	Slide SW., SPEAKER IMPEDANCE SELECTOR (XX)
	46736600	Slide SW., SPEAKER IMPEDANCE SELECTOR (UL,CSA)
6	22301900	Ground Terminal
7	46438100	2P-Terminal, PHONO
8	46363700	2P-Terminal, TUNER
9	46363900	6P-Terminal, CD, AUX, TAPE-1, TAPE-2/PCM
10	47662800	Side Panel Ass'y (R)
11	46425800	0.01 μ F 400V C.C.
	or 46943200	0.01 μ F 400V C.C.
12	15018601	Power Transformer (XX)
	15018602	Power Transformer (UL,CSA)
13	47662900	Side Panel Ass'y (L)
14	48062100	Slide SW., Voltage Selector (XX)

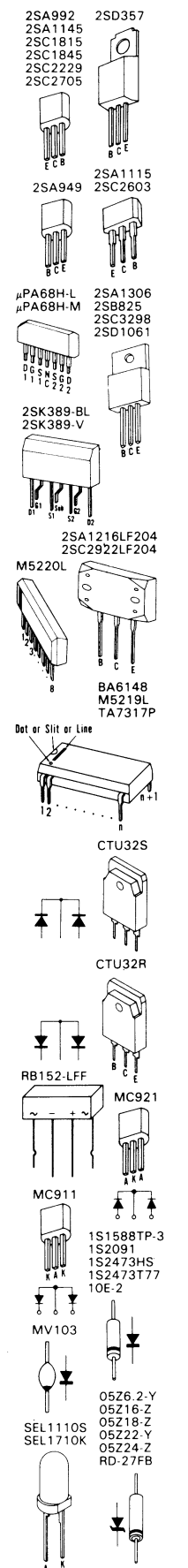
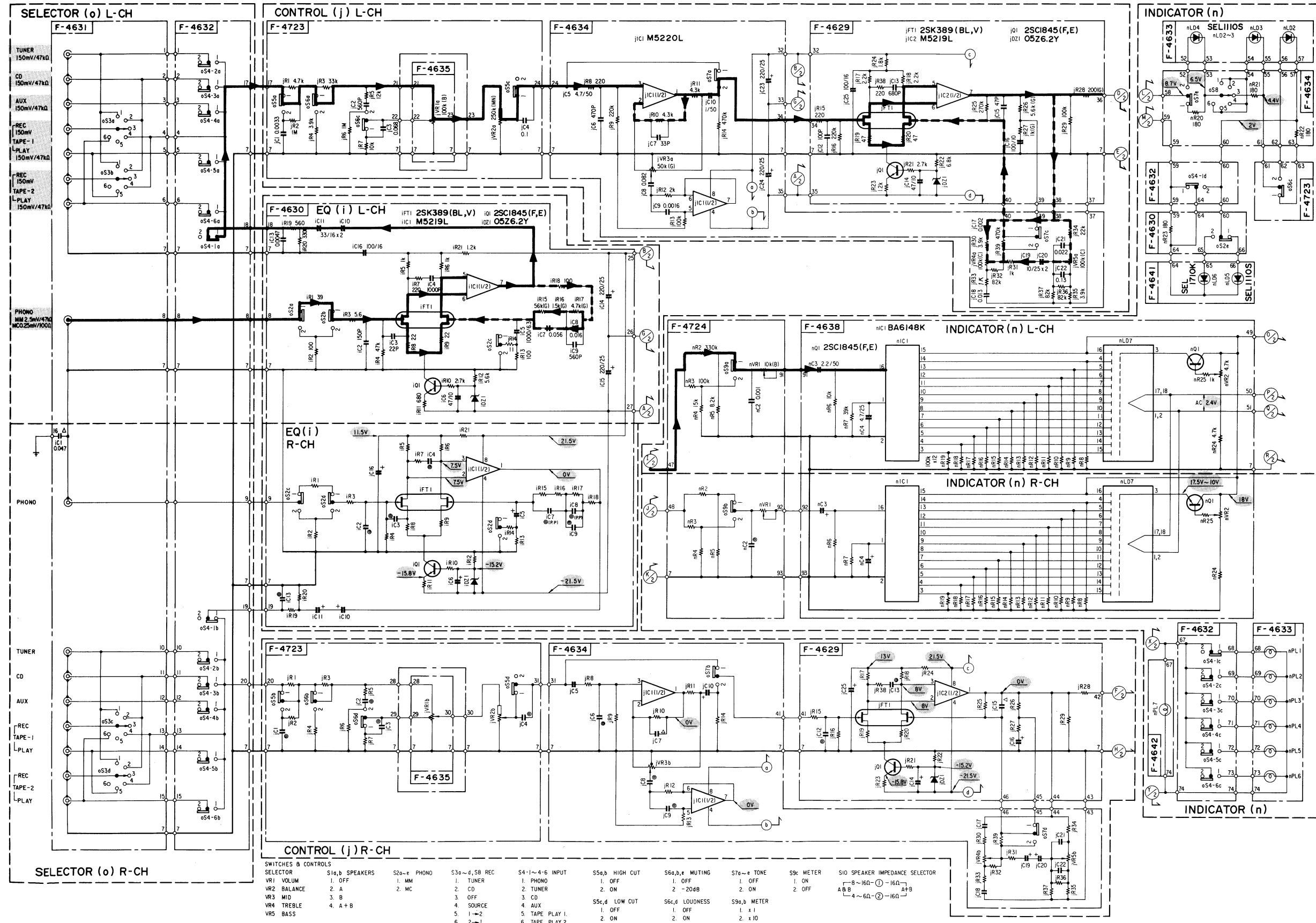
6-1. Power Amp. & Power Supply Section

* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



6-2. Control Amp. Section


* Design and specifications subject to change without notice for improvement.
 * La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
 * Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



Signal Line
 N.F.B. Line

- * Design and specifications subject to change without notice for improvement.
- * La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
- * Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

$$\begin{array}{c} \left[8 \sim 16\Omega - \textcircled{1} - 16\Omega \right] \\ A+B \qquad \qquad \qquad A+B \\ \left[4 \sim 6\Omega - \textcircled{2} - 16\Omega \right] \end{array}$$

 is Safety Part
Use only replacement parts recommended
by the manufacturer.

5